BINGHAM CONSOLIDATED MINING AND SMELTING COMPANY

Copper mining nor copper smelting afford no clinics more exhaustive nor lessons more instructive than those that have been taught by the Bingham Consolidated Mining and Smelting company in the evolution of its great mines at Bingham and Tintic, the crystallization of its smelter in Salt Lake valley. By the former the student presented with a discourse upon the copper, gold and silver-bearing resources of the State, to which there is little to be added; from the latter he derives a lesson on the economic reduction of ores and the channels through which great fortunes are achieved, that is imparted through no other school. Success in the one has been equally as pronounced as in the other, while the success of each has been made possible by the splendid sinews afforded by the ores of two camps upon which the splendid organization was founded.

It was in 1897 that those who laid the foundation for this splendid superstructure sought a foothold at Bingham and acquired it in a handful of earth that was, upon the map of those diggings, known as the Commercial group. The extent of this acquisition was confined to less than fifty acres, but not a recess within that area but was plugged with a wealth of copper, gold and silver-bearing ore. It was, indeed, as subsequent development demonstrated, a slice from the very heart of Bingham's great mineral-bearing zone. Prior to that time it had been mined for its auriferous ores and, while not productive of a large amount of gold, its operation had at least been made remunerative.

Search for Copper.

Profiting by the lessons that had been taught by its neighbor, the United States Mining company, the purchasers of the Commercial, who were to pioneer the way for the Bingham Copper and Gold Mining company, dismissed the gold-bearing stratum by which the main copper-bearing resources were overlaid and dropped at once into the underlying metals. The zone here developed as it had in the Highland Boy, as had it in the properties of the United States Mining company, and became a source of wealth relatively as great as that upon which any of its neighbors were founded. In 1898 the company was formally organized and began a career which has been as eventful and as productive as has any corresponding undertaking in the camp of copper. With the Commercial group as its nucleus and the great zone responding most generously to every stroke of the pick, every blast of giant, it was soon demonstrated that the resources of the Bingham Con. were as permanent as those of any of its contemporaries. Enormous volumes of copper-bearing ore having been blocked out, the company began to seek means for its reduction, this culminating in 1901 in the erection of a smelter, two furnaces then constituting its battery.

Acquires New Ground.

To the company it soon became apparent that it must surround itself with additional territory and for this the search was begun, its policy of expansion extending until finally it absorbed the great Dalton & Lark group of mines, each unit in which had been productive of a fortune that was piled higher and higher, until the water level was reached, and the control of that element became so onerous that operations were of necessity suspended. Added to the Bingham company's estate, the reclamation of ore bodies that had been long submerged was begun. The enormous expense that the contention with water incurred, however, forced them to suspend the active pumping of it and emboldened by the reports of every expert who had ever made inventory of its riches that they existed in large volume, it was finally decided to undermine the zone, tap the various channels through that avenue, and to unwater its ledges to a depth of many hundreds of feet below the horizon to which the waters had risen. It was in 1901 that this work was inaugurated. Since that time, with the exception of five months, during which the forces were withdrawn, this work has been prosecuted continuously until today it has penetrated the zone for a distance of 7000 feet. From it has poured a Niagara of water, the ore bodies so long in its embrace have been liberated, and today the Dalton & Lark group is supplying the furnaces with 250 tons of ore daily. Through it connection has been made with the Brooklyn ledge, one of the largest in the system, while within the next sixty days the Lark vein will have been tapped, connection with the Lead-Mine to follow some time the present year, at a distance of 9500 feet from the mouth of the tunnel. Meanwhile, the main purpose for which the drain tunnel was conceived has been accomplished, the upper workings have been unwatered, and work in new and hitherto unexplored territory is advancing at all points in dry earth.

Dalton and Lark's Resources.

Although a waterlog when it was acquired by the Bingham Consolidated Mining and Smelting company, the Dalton & Lark since its reclamation has become one of the most resourceful of its assets, and that it will continue to increase its output is emphasized by every shot that is fired, every shift that is excused. In the group has been prosecuted no less than 30,000 feet of work, and in this some of the most stupendous ore bodies of which Bingham has been permitted to boast have been disclosed. At intervals some of the ledges with which this group is honeycombed have shown a width of over eighty feet between walls, while for several hundred feet they have been opened up along their strike. Indeed, the history of the Dalton & Lark group is identical with the history of the neighboring mines. During its pioneer days it was productive of vast tonnages of ore, in which silver and lead predominated, while gold values there, as in other localities in a camp that was at one period mined for the gold it contained, constituted no small unit in its output. There has been the same transformation there, however, that there has been in the other mines. In levels below the latitude to which the waters had climbed, the lead has been replaced by the red metal and a ferro-sulphide carrying copper, gold and silver exists there, as does it in the neighboring bonanzas.

The Value of Its Ores.

While the metallic contents of some of this is very high, the average is identical with that which characterizes the other mines. In addition to the copper-bearing ores, there is found at intervals in this group lead-bearing channels, the average value of which exceeds greatly the average that rules in that camp. Of this class of ore several hundred tons per month are sent to the furnaces of the American Smelting and Refining company, settlements on a recent lot disclosing the presence of over 100 ounces of silver per ton, with considerable lead and good values in gold.

Of the Dalton & Lark group it may be said that it has developed into one of the company's most gigantic resources, and with the tunnel driven to its projected destination, a total distance of 13,000 feet from its portals, many most interesting and most profitable lessons on the occurrence of ore and the strength of the camp's great arteries may be relied on. In addition to the Brooklyn, the Lark and the Lead-Mine system of ledges, there are equally well-defined ones, equally productive ones, in the Miner's Dream, Yosemite and Antelope, and while the latter have not been extensively exploited, each has been and is now productive of ore. The system of ledges embraced within this group is undoubtedly one of the most remarkable that has been developed in the camps of Utah. None of them, no matter at what depth they have been explored in Bingham, have ever shown signs of quitting, and while a depth of over 1800 feet has been reached upon this zone, the resources at that depth are as strong and apparently as enduring as at any point between that and the grass roots above.

At the Commercial.

The Commercial group, adjoining the properties of the United States Mining company, and first among the Bingham Con. company's acquisitions in that great camp, has been fathomed to a depth of about 600 feet, with the workings throughout aggregating about 15,000 feet. From the hour the first volley of shots was put off in this territory it has been productive and while vast tonnages have been extracted, a larger volume is exposed today than at any period in the chronology of its operations. These ores are identical with those of which the neighboring mines are productive, consisting of a pyritic-iron containing copper, gold and silver, and with such an excess in iron as to constitute an ideal smelting product. In the Commercial group two tunnels have now been driven, the main one, or lower tunnel, connecting with the main ore-bearing zone at a point 430 feet lower than the upper one. The ledge at that depth is a tremendous one and is going down with a strength that can be stopped by dynamic resistance only. To fathom this enormous channel at greater depth a third tunnel has been projected, and, upon this, driving will probably begin early the present season. Through this the management expects to tap the ore bodies at over 1100 feet, connection at this point affording several hundred feet of stoping ground. At no time, indeed, have the ore bodies in the Commercial shown any signs whatever of decadence, and greater depth should disclose a volume of wealth even greater than that revealed in levels above.

Interior of Bingham Consolidated Bullion Dept.

The Tintic Purchase.

For a supply of silicious ore with which to blend the sulphides of its Bingham system the Bingham Consolidated Mining and Smelting company, in 1903, reached out and into Tintic, where in November of that year it acquired control of the Eagle & Blue Bell group containing eighty acres of ground adjoining that of the famous Centennial Eureka and covering the very heart of that most productive region. Since that time the properties of this company have been under the administration of the Bingham company. At its arteries it went with a zeal that had characterized it in all its undertakings and with an unstinted energy behind it, its ledges soon began to relax, soon began to respond with a considerable volume of gold, silver and copper bearing ore. The main ledge in this property since that time has been opened to a depth of 800 feet, the channel at that point showing great strength and while the property is one of the latest to develop in that camp, and along that zone, it affords many assurances of becoming as productive as are any upon it. Since taking hold of it the management of the Bingham Consolidated has succeeded demonstrating the presence of three distinct and independent channels, the characteristics of which are the same as are those in the Centennial Eureka, the same metals occurring in its ores. That this acquisition will be made a source of wealth equal to any other included in the Bingham Consolidated's holdings is now quite positively assured, and that larger volumes of ore will be encountered as depth is attained is clearly emphasized by the experience in the neighboring mines. With the silicious ores of the Eagle & Blue Bell combined with the copper, gold and silver-bearing fluxes of Bingham the management of the Bingham Consolidated has acquired a perfect smelting product and at a cost not above the nominal is accomplishing results that were hitherto unattainable. With the ore bodies of all these various holdings on which to draw the company now has at its command ore enough with which to meet the requirements of its plant in the valley for an indefinite period, and that it will begin the active distribution of wealth among its shareholders before the expiration of ninety days, is now reasonably well assured.

Bingham Con. Smelter.

The story of the Bingham Consolidated Mining and Smelting company's smelter in the valley and upon the tracks of two systems of railway, is the story of one of the most important achievements in the realms of Western metallurgy. The evolution of this plant, which has done so much to simplify methods of reduction, began with the installation of two furnaces, the product of which consisted of a matte, containing high percentages in the red metal, with not a small amount of gold and silver. In other words it produced a fire-concentrate for which there was an eager market at the furnaces of the custom smelter, where it was converted into pig-copper while affording a matchless flux in the reduction of other ores. This unit in the Bingham Consolidated company's smelter, constructed at a cost of less than $100,000, perhaps, was capable of reducing 300 tons of ore daily, the product regulated by the management and made to conform to that for which there was the best market at the furnaces to which it was subsequently consigned.

Furnaces Made Money.

While the smelter was unfinished and the superstructure at that time constituted but one unit in the imposing plant that had been projected and which has now been completed at a cost of about $1,000,000, it nevertheless became a source of steady revenue to the company and to those pioneer furnaces the founders are indebted not a little for subsequent achievements. About a year later and after the management had demonstrated conclusively the adaptability of its methods to the requirements of its ores, construction, so proficiently begun, was renewed. The next unit, which was completed in 1902, provided it with two converter stands and six shells, with a blowing capacity of 1000 horse-power or enough for two more of these units. In addition to these equipments there is a bri-quetting plant, etc., with every device essential to the efficient and economical reduction of ores. During the same cycle of construction additions have been made to the battery of blasts which at this time consists of five with a total of five that are capable of reducing approximately 1000 tons daily, although the management is contenting itself with about 800 at this hour. Perfected, the Bingham Consolidated company's smelter is, of its type, a perfect example of smelter construction and to the builders of similar plants throughout the country has been of invaluable service. In its consummation the company has spared nothing that could add whatsoever to the results it sought and it is said of it that it is now reducing its ores at a cost attained by no other in the country.

In the Open Market.

In addition to the output of its personal acquisitions the company has ever found it possible to help out the neighbors and of the tonnages reduced during the year not a little of it was from these sources. Among its contracts for custom work, indeed, are some of the largest ever signed up in the West. To its furnaces has appealed the management of the Utah Copper company, at whose mill in Bingham canyon about 20,000 tons of low-grade ore is being converted into high-grade copper gold and silver-bearing concentrates monthly, while the Boston Consolidated of the same great camp of copper is sending to them as much as 250 tons daily. At its furnaces is also being reduced the output of the Fortuna company's mines at Bingham, the Carisa, Grand Central and Star Consolidated of Tintic. In addition to this cluster, whose ores have found their way into Bingham Consolidated furnaces are miscellaneous others, while the output of Samuel Newhouse's plant through which the copper ores of the Cactus mines at Newhouse will soon begin to pass will also be reduced at these furnaces. From custom sources the company, indeed, is deriving a splendid revenue and the new season begins with every assurance of a material increase before the close of the year.

The Year's Outut.

The output of bullion from the furnaces of the Bingham Consolidated smelter during the year showed an aggregate of 11,480,146 pounds of copper bullion, which in addition to the red metal contained nearly 39,000 ounces of gold, nearly 1,400,000 ounces of silver. The year at the plant began with three furnaces only in commission. To this another was added in July, while in October a fifth was blown in and the capacity of the plant thus increased over 40 per cent. With this equipment the output of 1905 should be vastly increased, and while much depends upon the metallic contents of the charge, the management feels quite well assured that the crop for the year will exceed 18,000,000 pounds. At present it has four furnaces under fire with the fifth ready to go whenever consignments shall justify it. Meanwhile a tremendous stock of ore is carried in the bins within the smelter yard, while not one of the sources for which the company is relying for a steady supply but is capable of reporting with a greatly increased tonnage.

Earning Good Dividends.

That the Bingham Consolidated Mining and Smelting company, capitalized at $10,000,000 under the laws of Maine, has long been earning revenues greatly in excess of operating expenses has long been known to those of this State who have followed up its career. Conspicuously out of the rule, indeed, it has been piling up profits ever since the plant with its two matting furnaces went into active commission, and that the distribution of bread money was not inaugurated several years ago was that the earnings were levied upon for means with which to elaborate and to perfect the company's equipment, means with which to add to its territory and while the shareholders among whom are scattered 150,000 of the 200,000 shares, the other 50,000 remaining as a most stupendous asset in the treasury, and which has a valuation of approximately $2,000,000 on the present market, have been deprived of dividends during the period, the equivalent has found its way into increased assets, into the betterment of the smelter. Between them and dividends at this time, however, is a gap that ninety days should span, and while the officers of the company, uniformly conservative, have not authorized the announcement, the first in an endless succession of dividends will probably be posted in March, for distribution in April. At all events the period of disbursement has perhaps reached its end with the consummation of all that was undertaken by its founders when the equipment of the proposition with an up-to-date smelter was begun, when the acquisition of mines with which to supply their needs indefinitely was undertaken. If there is anything further to levy upon its earnings it is not apparent at this time, although there is a possibility that a future patronage of its plant shall become so liberal as to necessitate some day its further enlargement. Nor would that entail any serious encroachment upon its earnings for left in the site upon which the present plant is reared is abundant space with which to accommodate any enlargement that may be required.

The Company's Management.

The present organization by which the affairs of the company are directed, and by which its destinies are shaped, is an experienced one in the exploitation of large concerns and may be relied upon implicitly for a most intelligent and a most economic management, the official household consisting of E. L. White, president; O. E. Weller, treasurer; W. J. Freeman, secretary, and Duncan MacVichie, general manager.

Than anything that might be said in behalf of the local management the achievements at the mines, the results accomplished at the furnaces, will speak with infinitely greater emphasis. Capt. MacVichie, upon whom has devolved the general management of the company's interests, has given them his undivided attention, and it is under his supervision and the support accorded him by his superiors that the mines have attained a stature equal to the most prominent in the West if, at present, they are not levied upon for so great a tonnage as some of their neighbors. Of his ability as a manager and as a miner the results throughout, and those achieved at the Dalton & Lark in particular, afford splendid evidence. It was by him and his underground staff that the work at the latter was outlined that the results accomplished since that time were told with an accuracy that has been more than verified. In penetrating the group he has not only made it possible to eliminate an item of expense that had crippled the property for many years, but made it possible to operate it as one of the most productive of its assets. Not only has it made it possible to overcome the wafers in whose grip the enormous wealth of the bonanza was locked, but it will be made an outlet through which the ores shall be discharged at a cost merely nothing compared with means to which the previous owners were required to resort. When the group was turned over to him as an asset the production of ore from that source was entirely suspended. Today it is one of the most productive of its many sources of wealth. Results accomplished at the Eagle & Blue Bell of Tintic are equally expressive of the skill behind them. When the control of these properties was, upon the recommendation of Manager MacVichie, acquired by the company it was with much difficulty that the bills were paid without appeal to the shareholders. With the sinews afforded by the purchasing company, however, the systematic development of its channels was begun and at this time it is among the most active of the camp's producers.

At the smelter he has, with the aid of Superintendent William H. Nutting, achieved in the field of metallurgy equally as much in the company's behalf. In Superintendent Nutting, indeed, the company had secured the services of one who had been present at the birth of pyritic smelting in this country. During the experience that followed he had acquired a thorough knowledge of its minutest detail and under his immediate supervision the plant has attained a prestige in the world of smelting which singles it out as the ideal of its type.